

AMENDMENTS TO THE CLAIMS

Please amend the claims without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows.

Please cancel claims 1-3, 5, 8, 9, 15, 17, 18, 23, 26 and 27 without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

1-3. (Canceled)

4. (Currently Amended) A method for delivering a gene in a system for delivering DNA specifically to tumor tissues of an individual with cancer under anaerobic conditions, comprising the DNA, using a bacterium belonging to the genus *Bifidobacterium* transformed with an expressing vector with a terminator and a promoter functioning in the bacterium belonging to the genus *Bifidobacterium* as a gene delivery vector, wherein the DNA is selected from the group consisting of:

(a) DNA coding for a protein having an antitumor activity, and

(b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance; with a further proviso that if the DNA codes for a protein having an activity of converting a precursor of an antitumor substance, the method further comprises contacting the tumor tissue with a precursor of an antitumor substance.

5. (Canceled)

6. (Original) The method as claimed in Claim 4, wherein the precursor of an antitumor substance is selected from the group consisting of 5-fluorocytosine, 5-aziridino-2,4-dinitrobenzamide, ganciclovir, a glucuronic acid-conjugated antitumor substance and a lysine-conjugated antitumor substance.

7. (Original) The method as claimed in Claim 4, wherein the protein having the activity of converting a precursor of an antitumor substance into the antitumor substance is a protein selected from the group consisting of cytosine deaminase, nitroreductase, herpes simplex virus type 1 thymidine kinase and β -glucuronidase.

8-9. (Canceled)

10. (Currently Amended) The method as claimed in Claim 9 4, wherein the promoter and terminator are those involved in expressing a gene coding for histone-like DNA-binding protein (HU protein) derived from *Bifidobacterium longum*.

11. (Currently Amended) The method as claimed in Claim 9 ~~4~~, wherein the promoter and terminator are DNAs located at the 1- to 192-positions and at the 472- to 600-positions respectively in the nucleotide sequence set forth in SEQ ID NO: 1.

12. (Currently Amended) The method as claimed in ~~any one of Claims 1 to 3~~ Claim 4, wherein the bacterium is *Bifidobacterium longum*.

13. (Currently Amended) The method as claimed in ~~any one of Claims 1 to 3~~ Claim 4, wherein the bacterium is *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

14. (Currently Amended) A method for expressing a DNA delivered specifically to tumor tissues under anaerobic conditions in the tumor tissues of an individual with cancer, using a bacterium belonging to the genus *Bifidobacterium* transformed with an expressing vector with a terminator and a promoter functioning in the bacterium belonging to the genus *Bifidobacterium* as a gene delivery vector, comprising the DNA selected from the group consisting of:

(a) DNA coding for a protein having an antitumor activity, and

(b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance; with a further proviso that if the DNA codes for a protein having an activity of converting a precursor of an antitumor substance, the method further comprises contacting the tumor tissue with a precursor of an antitumor substance.

15. (Canceled)

16. (Currently Amended) A pharmaceutical composition comprising a bacterium belonging to the genus *Bifidobacterium* transformed with an expressing vector with a terminator and a promoter functioning in the bacterium belonging to the genus *Bifidobacterium*, comprising a DNA selected from the group consisting of:

(a) DNA coding for a protein having an antitumor activity, and

(b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance; with a further proviso that if the DNA codes for a protein having an activity of converting a precursor of an antitumor substance, the method further comprises contacting the tumor tissue with a precursor of an antitumor substance.

17-18. (Canceled)

19. (Previously Presented) The pharmaceutical composition as claimed in Claim 16, wherein the bacterium is *Bifidobacterium longum*.

20. (Previously Presented) The pharmaceutical composition as claimed in Claim 16, wherein bacterium is *Bifidobacterium longum* 105-A/pBLES100-S-eCD (FERM BP-7274).

21. (currently amended) A bacterium belonging to the genus *Bifidobacterium* transformed with an expressing vector with a terminator and a promoter functioning in the bacterium belonging to the genus *Bifidobacterium*, comprising a DNA selected from the group consisting of:

(a) DNA coding for a protein having an antitumor activity, and

(b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance; with a further proviso that if the DNA codes for a protein having an activity of converting a precursor of an antitumor substance, the method further comprises contacting the tumor tissue with a precursor of an antitumor substance.

22. (Currently amended) A genetically modified bacterium, wherein the bacterium is a *Bifidobacterium longum* 105-A/pBLES100-S-eCD (having the deposit accession number FERM BP-7274.

23. (Canceled)

24. (Currently Amended) A The method of treating a solid tumor, which comprises use of the method as claimed in ~~any one of Claims 1 to 3~~ Claim 4 , wherein the tumor tissues are solid tumors.

25. (Currently Amended) A method of treating a solid tumor, which comprises administering a bacterium belonging to the genus *Bifidobacterium* transformed with an expressing vector with a terminator and a promoter functioning in the bacterium belonging to the genus *Bifidobacterium*, comprising a DNA selected from the group consisting of:

(a) DNA coding for a protein having an antitumor activity, and

(b) DNA coding for a protein having an activity of converting a precursor of an antitumor substance into the antitumor substance; with a further proviso that if the DNA codes for a protein having an activity of converting a precursor of an antitumor substance, the method further comprises contacting the tumor tissue with a precursor of an antitumor substance.

26-27. (Canceled)